CLAIMS

What is claimed is:

1. A method for an interrogator to identify an interrogated object, comprising the steps of

providing a light transceiver to the interrogator;

associating a dynamic optical tag with the interrogated object, wherein the dynamic optical tag receives an output light beam from the light transceiver and controllably reflects the output light beam back to the light transceiver as an input light beam, wherein the dynamic optical tag comprises

a controllable light reflector that is controllable between a reflective state and a non-reflective state and having a modulation signal input, and

a controller that provides the modulation signal input to the controllable light reflector;

the interrogator transmitting an interrogation light beam from the light transceiver to the dynamic optical tag as the output light beam;

the dynamic optical tag reflecting a modulated interrogation light beam back to the light transceiver as the input light beam; and

the light transceiver receiving and analyzing the input light beam to determine an identity of the dynamic optical tag and the interrogated object.

2. The method of claim 1, including an additional step of

providing the interrogated object with a tag light receiver of the output light beam.

3. The method of claim 1, wherein the step of associating includes the step of

providing the controllable light reflector comprising a micro electro-mechanical system corner cube array.

4. The method of claim 1, wherein the step of associating includes the

step of

positioning a field-of-regard broadening structure overlying the controllable light reflector.

5. The method of claim 1, wherein the step of associating includes the step of

positioning a volume hologram overlying the controllable light reflector.

6. The method of claim 1, wherein the step of associating includes the step of

positioning at least two volume holograms overlying the controllable light reflector.

7. The method of claim 1, wherein the step of associating includes the step of

positioning at least two volume holograms overlying the controllable light reflector, wherein the at least two volume holograms are in a side-by-side relation.

8. The method of claim 1, wherein the step of associating includes the step of

positioning at least two volume holograms overlying the controllable light reflector, wherein the at least two volume holograms are in a superimposed relation.

9. The method of claim 1, wherein the step of associating includes the step of

positioning a volume hologram overlying the controllable light reflector, wherein the volume hologram has a cylindrical optical power, a Fresnel Zone plate pattern, or a linear grating pattern.

10. The method of claim 1, wherein the step of associating includes the step of

providing the controllable light reflector that covers a field of regard of greater than 90 degrees relative to the controllable light reflector.

11. A dynamic optical tag identification system comprising

a light transceiver; and

a dynamic optical tag that receives an output light beam from the light transceiver and controllably reflects the light beam back to the light transceiver as an input light beam, wherein the dynamic optical tag comprises

a controllable light reflector that is controllable between a reflective state and a non-reflective state and having a modulation signal input, wherein the controllable light reflector reflects over a field of regard of greater than 90 degrees relative to the controllable light reflector, and

a controller that provides the modulation signal input to the controllable light reflector.

12. The dynamic optical tag identification system of claim 11, wherein the light transceiver comprises

a laser light source that produces the output light beam,

a light receiver that receives the input light beam, and

an optical system through which the output light beam and the input light beam are directed.

13. The dynamic optical tag identification system of claim 11, wherein the controllable light reflector comprises

a micro electro-mechanical system corner cube array.

14. The dynamic optical tag identification system of claim 11, wherein the dynamic optical tag further includes

a tag light receiver operable to receive the output light beam.

15. The dynamic optical tag identification system of claim 11, further including

a field-of-regard broadening structure overlying the controllable light reflector.

16. The dynamic optical tag identification system of claim 11, further including

a volume hologram overlying the controllable light reflector.

17. The dynamic optical tag identification system of claim 11, further including

a volume hologram overlying the controllable light reflector, wherein the volume hologram has a cylindrical optical power.

18. The dynamic optical tag identification system of claim 11, further including

a volume hologram overlying the controllable light reflector, wherein the volume hologram has a Fresnel Zone plate pattern.

19. The dynamic optical tag identification system of claim 11, further including

a volume hologram overlying the controllable light reflector, wherein the volume hologram has a linear grating pattern.

20. The dynamic optical tag identification system of claim 11, further including

at least two volume holograms overlying the controllable light reflector.

21. The dynamic optical tag identification system of claim 11, further including

at least two volume holograms overlying the controllable light reflector, wherein the at least two volume holograms are in a side-by-side relation.

22. The dynamic optical tag identification system of claim 11, further

including

at least two volume holograms overlying the controllable light reflector, wherein the at least two volume holograms are in a superimposed relation.